In the claims:

1. (Currently Amended) A cathode for an imaging tube comprising:

an emitter emitting an electron beam to a focal spot on an anode;

an aperture;

a backing member differentially biased relative to said aperture, electrically disposed on a second side of said emitter, and contributing in formation of said electron beam; and

at least one deflection electrode pair electrically disposed between said backing member and said anode and adjusting positioning of said focal spot on said anode.

2. (Currently Amended) A cathode as in claim 1 further comprising a front member electrically coupled between a first side of said emitter and said anode, ~~and having an~~ comprising said aperture, and contributing in formation of said electron beam.

3. (Original) A cathode as in claim 1 wherein said at least one deflection electrode pair comprises:

a first side steering electrode electrically disposed on a first side of an emitter centerline; and

a second side steering electrode electrically disposed on a second side of an emitter centerline.

4. (Original) A cathode as in claim 3 comprising:

a first side steering electrode insulator coupled between said first side steering electrode and said backing member and isolating said first side steering electrode; and

a second side steering electrode insulator coupled between said second side steering electrode and said backing member and isolating said second side steering electrode.

5. (Original) A cathode as in claim 1 wherein said at least one deflection electrode pair is electrically disposed between a front member and said backing member.

6. (Original) A cathode as in claim 1 wherein said at least one deflection electrode pair is electrically disposed between said emitter and a front member.

7. (Original) A cathode as in claim 1 further comprising a plurality of insulators coupled between said backing member and a front member and isolating at least one component of the cathode.

8. (Currently Amended) ~~A cathode as in claim 1 wherein~~ A cathode for an imaging tube comprising:

an emitter emitting an electron beam to a focal spot on an anode;

a backing member electrically disposed on a second side of said emitter contributing in formation of said electron beam; and

at least one deflection electrode pair electrically disposed between said backing member and said anode and adjusting positioning of said focal spot on said anode;

said at least one deflection electrode pair and said backing member are biased to cause current of said electron beam to be modulated.

9. (Currently Amended) ~~A cathode as in claim 1 wherein~~ A cathode for an imaging tube comprising:

an emitter emitting an electron beam to a focal spot on an anode;

a backing member electrically disposed on a second side of said emitter contributing in formation of said electron beam; and

at least one deflection electrode pair electrically disposed between said backing member and said anode and adjusting positioning of said focal spot on said anode;

said at least one deflection electrode pair and backing member are biased to cause current of said electron beam to be cut off.

10. (Original) A cathode as in claim 1 wherein the cathode is mechanically symmetrical.

11. (Original) A cathode as in claim 1 wherein said at least one deflection electrode pair is biased to cause said electron beam to be asymmetrically extracted from said emitter.

12. (Currently Amended) ~~A cathode as in claim 1 wherein~~ A cathode for an imaging tube comprising:

an emitter emitting an electron beam to a focal spot on an anode;

a backing member electrically disposed on a second side of said emitter contributing in formation of said electron beam; and

at least one deflection electrode pair electrically disposed between said backing member and said anode and adjusting positioning of said focal spot on said anode;

said at least one deflection electrode pair comprises:

a first pair of deflection electrodes; and

a second pair of deflection electrodes.

13. (Original) A cathode as in claim 12 wherein said first pair of deflection electrodes adjusts position in width direction and width of said focal spot.

14. (Original) A cathode as in claim 12 wherein said second pair of deflection electrodes adjusts position in length direction and length of said focal spot.

15. (Original) A cathode as in claim 1 wherein said at least one deflection electrode pair form an electron beam passage area therebetween.

16. (Currently Amended) A method of operating an electromagnetic source comprising:

emitting an electron beam from a differentially biased cathode having an aperture that is differentially biased relative to a backing member;

generating a dipole field;

interacting said electron beam with said dipole field and differential bias of said differentially biased cathode; and

asymmetrically biasing said electron beam.

17. (Original) A method as in claim 16 further comprising modifying said dipole field.

18. (Original) A method as in claim 16 further comprising modifying said asymmetrical biasing of said electron beam.

Claims 19-29 canceled.

30. (New) A cathode as in claim 1 wherein said at least one deflection electrode pair form said aperture.